

EC-TYPE EXAMINATION CERTIFICATE



[1]

[2]

Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

[3]

EC-Type Examination Certificate Number: **DEMKO 13 ATEX 1205039X Rev. 3**

[4]

Equipment or Protective System: **Flashlight, Models DS-1, DS-8, DS-10, and DS-2**

[5]

Manufacturer: **Daysun Technology Ltd.**

[6]

Address: **No. 1, Alley 2, Ln. 110, Sec. 4, Hsimen Rd., Tainan 704, Taiwan**

[7]

This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **4786446041**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009

EN 60079-11:2012

EN 60079-26:2007

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11]

This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system.

These are not covered by the certificate.

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The marking of the equipment or protective system shall include the following:

 **II 1 G Ex ia IIC T4 IP67**

Certification Manager

Jan-Erik Storgaard

This is to certify that the sample(s) of the Equipment described herein ("Certified Equipment") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the equipment sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured equipment. UL has not established Follow-Up Service or other surveillance of the equipment. The Manufacturer is solely and fully responsible for conformity of all equipment to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2013-10-14

Re-issued: 2014-10-07

Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com



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Schedule

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Description of Equipment or protective system

Models DS-1, DS-8, DS-10, and DS-2 are intrinsically safe hand-held, portable flashlights for use in Zone 0 Hazardous Locations when powered by four ZnMnO₂ size "AA", 1.5V alkaline cells connected in series.

The following batteries were considered acceptable for use in the flashlights:

Manufacturer	Part Number
Ansmann	1502-0002
Ansmann	5015548
Duracell	MN1500
Energizer	E91
Rayovac	815

Performance Testing

The optical radiation output of the apparatus with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 94/9/EC is not covered in this certificate.

Temperature range

The ambient temperature range is -20 °C to +40 °C.

Routine tests

N/A.

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Report No.

Project Report No.: 4786446041 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
All Models Overview	A01. DS-2 Combination	1.0	2014-09-25
Model DS-1 Label	M19. DS-1 Marking	2.0	2013-10-09
Model DS-1 Label	M21. DS-1 Marking EU	2.0	2013-10-09
Model DS-8 Label	M19. DS-8 Marking	3.0	2014-06-19
Model DS-8 Label	M21. DS-8 Marking EU	2.0	2014-06-19
Model DS-10 Label	M19. DS-10 Marking	2.0	2013-10-09
Model DS-10 Label	M21. DS-10 Marking EU	2.0	2013-10-09
Model DS-1 Manual	-	2.0	-
Model DS-8 Manual	-	2.0	-
Model DS-10 Manual	-	2.0	-
Model DS-1 Exploded View	EX01. DS-1 Explosion	2.0	2013-08-29
Model DS-8 Exploded View	EX02. DS-8 Explosion	2.0	2013-08-29
Model DS-10 Exploded View	EX03. DS-10 Explosion	2.0	2013-08-29
Model DS-1 Body	M04. DS-1 Body	1.0	2012-11-16
Model DS-8 Body	M13. DS-8 Body	1.0	2012-11-16
Model DS-10 Body	M16. DS-10 Body	1.0	2012-11-16
Model DS-1 Cap Rubber	M06. DS-1 Cap Rubber	1.0	2012-11-16
Model DS-8 Cap Rubber	M14. DS-8 Cap Rubber	1.0	2012-11-16
Model DS-10 Cap Rubber	M17. DS-10 Cap Rubber	1.0	2012-11-16



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Description:	Drawing No.:	Rev. Level:	Date:
Model DS-1 Push Button	M07. DS-1 Push Button	2.0	2014-03-31
Model DS-8 Push Button	M15. DS-8 Push Button	2.0	2014-03-31
Model DS-10 Push Button	M18. DS-10 Push Button	2.0	2014-03-31
Push Button Lock Mechanism	M08. DS-1 Lock	1.0	2012-11-16
Models DS-1, DS-8 and DS-10 Parts List	B01. DS-1 ME-BOM	2.0	2013-08-29
Venting Mechanism	M26. DS-1 Vent	1.0	2013-07-29
O-ring 2 mm	M25. DS-1 O-Ring	1.0	2013-07-29
O-ring 2.5 mm	M27. DS-1 O-Ring	1.0	2013-08-31
Partition Board	M24. DS-1 Partition Board	1.0	2013-07-29
Wire	M22. DS-1 Internal Wire	1.0	2013-07-29
Infallible Wire Connection	M23. DS-1 Wire Soldering	1.0	2013-07-29
Lamp Assembly	A01. DS-1 Lamp Assembly	1.0	2013-09-23
Lens Bracket	M10. DS-1 Lens Bracket	1.0	2012-11-16
Schematic	E01. DS-1 Schematics	3.0	2014-01-13
Electrical Bill of Material	B02. DS-1 BOM-EE	4.0	2013-11-22
CON2 Power Board	E02. DS-1 CON2	3.0	2013-11-22
CON1 Resistor Board	E02. DS-1 CON1	2.0	2013-07-29
LED Board	E02. DS-1 LED	2.0	2013-07-29
Model DS-2 Manual	-	1.0	-
Model DS-2 Mechanical Bill of Material	B01. DS-2 ME-BOM	1.0	2014-05-09
Model DS-2 Exploded View	EX04. DS-2 Explosion	1.0	2014-05-09
Model DS-2 Body	M04. DS-2 Body	1.0	2014-05-09
Model DS-2 Cap Rubber	M06. DS-2 Cap Rubber	1.0	2014-05-09
Model DS-2 Push Button	M07. DS-2 Push Button	1.0	2014-05-09
Model DS-2 Lock	M08. DS-2 Lock	1.0	2014-05-09
Model DS-2 Partition Board	M24. DS-2 Partition Board	1.0	2014-05-09
Model DS-2 Marking	M19. DS-2 Marking	1.0	2014-05-09
Model DS-2 Marking EU	M21. DS-2 Marking EU	1.0	2014-05-09



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Special conditions for safe use:

- Read manual before use.
- Use only battery types Energizer E91, Duracell MN1500, Rayovac 815, Ansmann 5015548, or Ansmann 1502-0002.
- Do not open or replace batteries in an area known to be Hazardous.
- Do not mix batteries from different manufacturers.
- Do not mix used batteries with new batteries.
- The screw shall be secured tightly after opening and closing the enclosure.

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Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Annex III of ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

The Models DS-1, DS-8, DS-10, and DS-2 have in addition passed the tests for Ingress Protection to IP67 in accordance with EN60529: 1991/A1 2001.



The Registered Trademark,



or



, for Daysun Technology Ltd. may be used as the company identifier on the marking label.

This certificate was issued as "Accredited by DANAK under registration number 7011 to certification of products".

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

